

## PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE  
SAN FRANCISCO, CA 94102-3298



July 12, 2007

Mr. Alfred F. Jahns  
Law Office of Alfred F. Jahns  
3436 American River Drive, Suite 12  
Sacramento, CA 95864

***Subject: Sacramento Natural Gas Storage Project (Application No. 07-04-013)***

Dear Mr. Jahns:

The CPUC, with technical assistance from Dudek Environmental, has reviewed the Sacramento Natural Gas Storage Project CPCN Application (Application No. 07-04-013 dated April 9, 2007) and the Proponents Environmental Assessment (PEA). The CPUC's *Information and Criteria List* was used as a basis for evaluating completeness and ensuring that sufficient information has been provided to the CPUC to complete environmental analysis for the subject project as required by the California Environmental Quality Act (CEQA).

Based on review of the Application and PEA and a reconnaissance level survey of the project areas, we find that there are a number of items that are needed in order to conduct the environmental analysis for the subject project. *Attachment A* identifies the various deficiency items and requests additional information that will be used for significance determination and to support the findings of the CEQA document.

In addition, a number of items are requested under Section 3.11 (Public Health and Safety) that are required to complete the System Safety and Reliability study.

If you have any questions regarding this letter or need additional information, please let me know.

Sincerely,

Michael Rosauer  
CPUC Project Manager

*Attachment: CPCN Application 07-04-013 – Review for Completeness*

## ATTACHMENT A

### Sacramento Natural Gas Storage Project CPCN Application (A.07-04-013) Review of Completeness

---

#### EXECUTIVE SUMMARY

- a) Please provide a statement regarding areas of controversy or areas to be resolved. Has any opposition to the project been expressed?
- b) Please provide all agency and public involvement contacts and correspondence to date, including names, addresses, phone numbers and e-mail addresses. In addition to property owners within and adjacent to the project, please list all other contacts.

#### 1.0 PURPOSE AND NEED

- a) SNGS refers to the California Public Utilities Commission and the California Energy Commission's stated need for natural gas storage projects in California. Please provide further detail regarding the project objectives pertaining to the proposed location and benefits both from a regional and statewide perspective.

#### 2.0 PROJECT DESCRIPTION

##### 2.1 Site Description

- a) Section 2.1 describes interconnections between the SNGS storage facility and PG&E Line 108 and between the SNGS storage facility and PG&E Line 400/401. These pipelines are not labeled or shown on the subsequent maps (i.e. Figures 2-2, 2-4, or 2-8). Please provide the following information so that each project component can be accurately described:
  - i. The location of PG&E's Line 400/401 and Line 108.
  - ii. Confirm that only new pipe that will be installed is shown on Figure 2-2 in orange.
  - iii. Confirm that the pipeline will have a loop on either side of Caroline Road from Elder Creek Road to the compressor station and that two lines run from the compressor station to the existing pipelines on Fruitridge Road as shown on

# ATTACHMENT A

## Review of Completeness

---

Figure 2-2. Or, if the orange lines show the two possible pipeline routes (using either 1 or 2 HDDs), clearly label as such.

- iv. Show to scale project limits for the compressor station and wellhead site so that the exact limits of work can be deciphered.
- v. Please provide a graphic that shows the limits of the Florin Gas Field, with the project components labeled for reference.
- vi. The above requested graphical data may be provided electronically in GIS format.

### 2.2 Project Background

- a) It is not clear how the project is tied into PG&E's Line 108 and whether this will require an additional interconnect. A schematic of the pipelines described in the third paragraph of Section 2.2, including what is existing and what will be constructed as an interconnect, would clarify the project components that are being constructed as part of this project.

### 2.3 Facility Route Selection and Evaluation Process

- a) Figure 2-4 depicts a green box on the east side of Caroline Road, near the SMUD interconnect. A green box is also depicted immediately east of the proposed wellhead site. Are these proposed workspaces? If so, provide the dimensions of the workspaces and draw to scale on the graphic.

### 2.4 Project Components

- a) **Wellhead Site:** Section 2.4.1 describes a horizontal vessel water separator at the wellhead site that would be approximately 8 feet by 20 feet and include a water tank for temporary storage.
  - i. Figure 2-5 depicts the water separator to be 3 feet in diameter by 15 feet high. Please update drawing or text as appropriate.
  - ii. Figure 2-5 shows 5 water tanks measuring 12 inches in diameter by 10 feet high. Section 2.4.1 describes one water tank. Please confirm the dimensions and number of equipment described in Section 2.4.1 and in Figure 2-5.
  - iii. Illustrate and further describe proposed water and sewer lines proposed for wellhead construction and operation.

## ATTACHMENT A

### Review of Completeness

---

- b) **Compressor Station:** Section 2.4.2 describes the electric power supply in the second paragraph. Would a new powerline need to be construction to supply the needed power, or will it be brought in from an adjacent distribution line? If a new line is needed, are the impacts associated with above ground or below ground installation within the project limits shown on Figure 2-7?
- c) **Morrison Creek Cross-tie Metering Equipment:** For the Morrison Creek Cross-tie Metering Equipment, please provide the following additional information:
- i. Provide the proposed workspace limits for this component of the project. If the limits of work are an existing fenceline, show the fenceline on the figure or graphic.
  - ii. Is additional above ground pipe required to tie into the proposed gas conditioning equipment? A schematic showing what is existing and what will be installed should be included to accurately describe the proposed work at this site.
  - iii. Confirm that all work at the Morrison Creek Cross-tie will be above ground and within the existing fenced limits.
  - iv. Describe the type of equipment that will be used to complete the work and approximate duration.
  - v. What are the patrol, maintenance, or inspection requirements during the operation and maintenance phase for the metering and gas conditioning equipment?

## 2.5 Construction Methods

- a) **Wellhead Construction:** Are there any additional workspace needs associated with the installation of the water and sewer lines described in Section 2.5.1, first paragraph, or will all the work be conducted within the workspace shown on Figure 2-4?
- b) **Pipeline Construction Methods:** In order to qualify and quantify temporary impacts associated with construction equipment, please add the estimated number of each piece of equipment that will be used. Since construction of the pipelines, compressor station, and wellhead each use unique equipment and at separate locations, Table 2-1 should be divided by project component. Also, confirm the use and number of the following: stringing trucks, drill rig (HDD), drill rig (wells), boring machines (horizontal for roads and railroad), stationary pumps, stationary generators, bending machine, X-ray trucks that have not been included in the table.

## ATTACHMENT A

### Review of Completeness

---

The workspace for the HDD, including any false ROW requirements for the pull-back area should be shown and described so that temporary impacts associated with the HDD can be defined and assessed.

- c) **Best Management Practices:** Have the engineering and geology studies required by DOGGR and described on page 2-20, last paragraph, been completed? If so, are copies available for review?
- d) **Workforce:** Please estimate the maximum number of workers that could be working on the project on any given day. It is assumed that the 150-200 employees described would likely not occur at the same time. Please confirm.

### 2.6 Operation and Maintenance

- a) In Section 2.6, if a leak occurs and releases odorized gas into the atmosphere, the leak would be repaired as soon as practical. What interim steps would be taken to stop the leak that have been included into the design of the project (i.e. remote or hand-operated valves, etc.)?
- b) Please provide additional detail on the operational phase monitoring and safety equipment associated with the project. (See questions under Section 3.11 for more specific requests regarding safety.)

### 3.0 ENVIRONMENTAL ANALYSIS

#### 3.1 Aesthetics

- a) **Wellhead Site:** Single family housing near northwest corner of wellhead site was underway in November 2006. Has construction of this residential community been completed? Are the dwellings occupied? What are the views of the wellhead site from these new residences?
- b) **Figure 3.2-1:** Looks like graphic has been cut off in the PDF version of PEA. Please confirm. Also, Viewpoints E and F are not plotted on map. Please provide.
- c) **Impact Assessment Methods:** Paragraph 1, Section 3.2.4 indicates that “site plans for the project facilities and pipe alignments” were used to evaluate potential effects on surrounding visual character. Please provide the following:

# ATTACHMENT A

## Review of Completeness

---

- i. Site plan for the Morrison Creek Cross-tie (not provided in Chapter 2, Project Description).
- ii. Correct elevations of proposed facilities at Wellhead Site should be confirmed. Text describes wellheads extending 6 feet above ground, with visual screening provided by 8-foot masonry wall. However, Figure 2-5 shows an H<sub>2</sub>O separator and H<sub>2</sub>O tanks with heights of 15 feet and 10 feet, respectively. Confirm equipment heights and correct graphics/text as appropriate.

### 3.2 Air Quality

#### a) Project Description

- i. Figure 2-7 (page 2-10) shows an emergency generator at the northwest corner of the compressor station. No description of the emergency generator is provided in the PEA. What is its estimated rating (kilowatts or horsepower)? Will it be fueled with diesel fuel or natural gas? How many hours per day and per year will it be operated for testing and maintenance (i.e., non-emergency use)?
- ii. The project description (page 2-12) does not include a discussion of the dehydration system or reboilers. Because this equipment is the primary source of emissions from the compressor station, it should be described in sufficient detail to estimate the emissions, including but not limited to the following:
  - process description and schematic;
  - heat input rating of reboilers; and
  - daily processing rate of dehydration equipment.

#### b) Impact Assessment Results

- i. The information in Table 3.3-2 will need to be updated. For example, the National Ambient Air Quality Standard for ozone has been revoked (therefore, Note f. is incorrect) and the California Air Resources Board (CARB) has adopted an 8-hour standard for ozone.
- ii. *Pages 3.3-14 to 15:* The maximum estimated construction emissions of oxides of nitrogen are just below the Sacramento Metropolitan Air Quality Management District's (SMAQMD) significance threshold of 85 pounds per day. Upon review of the URBEMIS2002 output in the PEA, we found that the operating hours for

## **ATTACHMENT A**

### **Review of Completeness**

---

most of the “grading” equipment was changed from the default value of 8 hours per day to 5 hours per day (the drill rigs are shown as operating 24 hours per day). No justification is given for these operating hours. Similarly, some of the building construction equipment and asphalt paving equipment are shown to be operated less than 8 hours per day with no justification.

- iii. Are the emissions for trenching to install the pipelines accounted for in the PEA? Although trenching is discussed in general, the exact construction details, such as length of construction time, are not included in the project description or air quality section of the PEA.
- iv. Kirby Hills emission data is used in the PEA; however, project-specific information (i.e. equipment, sensitive receptors) needs to be provided, along with supporting calculations, to conclude that the emissions would be the same. If basic equipment and their corresponding emissions are the same for both projects, this should be indicated.
- v. The air quality section of PEA indicates a “thermal oxidizer”, but it is not described elsewhere in the PEA. What is the purpose of the thermal oxidizer? What is its rating (million Btu per hour or standard cubic feet per hour)? If the thermal oxidizer is used to flare natural gas during routine events (e.g., disposal of gas during maintenance operations), then the emissions associated with flaring should be reported.
- vi. *Page 3.3-17*: Use of the Kirby Hills project in lieu of providing project-specific estimates for the assessment of health impacts is not adequate for the Initial Study. In addition to potentially different emissions, another concern is that the area surrounding the SNGS facility appears to have relatively close residential uses to the west of the compression station. A project-specific health risk assessment, including Toxic Air Contaminant (TAC) calculations is needed to determine the affects of the project on nearby residents, schools, and businesses.
- vii. Please quantify and provide greenhouse gas emissions.

### **3.3 Biological Resources**

#### **a) Environmental Setting**

- i. Please provide the limits of all jurisdictional wetlands and waterbodies within and adjacent to the proposed project areas.

## ATTACHMENT A

### Review of Completeness

---

- ii. Please provide results on any protocol-level surveys for special-status species potentially occurring within the proposed project areas. If protocol-level surveys have not been conducted, please provide a schedule for when these surveys will be complete.

#### b) **Impact Assessment Results**

- i. Table 3.4-1 identifies a “low” likelihood for giant garter snake to exist. Under BIO-3 (page 3.4-20) the PEA states that it is “unlikely” for garter snakes to occur and, therefore, no impact is expected. Please verify potential occurrence for giant garter snake.
- ii. Mitigation is provided for impacts to burrowing owls and their nests, but not for breeding habitat as required by CDFG. What mitigation is proposed for impacts to burrowing owl breeding habitat?

#### 3.4 **Cultural Resources**

- a) The information relating to cultural resources provided in the PEA is inadequate in that it does not provide sufficient baseline information needed to determine if the project would have an impact on archaeological and/or historic resources. Many of the technical studies (archaeological surveys) cited in the PEA that are within, or within a ¼ mile proximity to, the project area are in excess of 20 years old. While professional archaeological survey methods have changed little in the past two decades, there is the possibility that some of these technical studies may (1) not have used methodologies consistent with current archaeological professional standards, and/or (2) may have “passed over” potentially unique historic archaeological resources that were not 50 years of age at the time of those studies. It was also noted in the PEA that there are significant portions of the project area and/or pipeline alignment and alternatives that have not been subject to any archaeological survey.
- b) A qualified archaeologist who meets the Secretary of Interior’s Standards for Archaeology (Archaeologist) needs to define the vertical and horizontal archaeological study area for the proposes of CEQA. The Archaeologist will need to conduct a peer review of all previous archaeological technical studies within the project study area and determine if the methodologies used are consistent with today’s professional practice standards. In particular, a review of how the potential for buried archaeological resources were addressed in a geomorphology section (if any) of the technical reports needs to be conducted.

## **ATTACHMENT A**

### **Review of Completeness**

---

- c) Any areas of the project site, pipeline route, and/or alternative pipeline routes that have not been subject to previous archaeological survey or have been determined by a qualified archaeologist to require re-survey due to inadequate methodologies should be subjected to a new pedestrian archaeological reconnaissance survey.
- d) A technical archaeological survey report should be prepared that documents (1) a detailed definition and map depicting the vertical and horizontal study area for potentially ground disturbing activities including pipelines, wellheads, compression station, staging area(s), and directional drilling preparation areas, (2) detailed peer review of previous technical studies, (3) professionally defensible justification for not resurveying areas that were previously surveyed, (4) a discussion and assessment of the potential for buried archaeological deposits at the maximum depth to be impacted by project trenching and directional drilling activities, (5) a thorough discussion of the methods and results of the previous cultural resource studies that were conducted at the proposed compressor station on the former Sacramento Army Depot site, and (6) report on the results of a new pedestrian archaeological reconnaissance survey of the remaining unsurveyed and/or resurveyed lands to determine if unique archaeological resources are present in the study area.
- e) Copies of the November 3, 2006 North Central Information Center Record Search, a sample Native American consultation letter and mailing list, and the requested technical archaeological survey report will need to be provided to the CPUC for an independent third-party review.

### **3.5 Energy and Mineral Resources**

No additional information needed at this time.

### **3.6 Geology, Soils, and Paleontology**

- a) Subsurface borehole and/or seismic data of the Florin Gas Field is needed to determine the existing physical condition of the reservoir and surrounding strata. Provide subsurface structures/stratigraphy database and a detailed description of existing subsurface reservoir conditions for use in evaluation/confirmation of reservoir integrity.
- b) Provide a baseline of the existing reservoir conditions prior to injection of natural gas, and what effect(s) depletion of historic natural gas may have had on the reservoir.
- c) Additional data is needed to ensure that subsidence has not occurred that could have resulted in fractured sandstone and/or shale cap rock. A more detailed description is needed of how the natural gas will be injected and how it relates to replacement of water

## **ATTACHMENT A**

### **Review of Completeness**

---

and perseveration of reservoir integrity. Provide copies of the engineering plan, geology plan and injection plan.

- d) Please provide any geotechnical studies that have been conducted for the wellhead, compressor station and pipeline routes.

### **3.7 Hydrology and Water Quality**

- a) What is the status of the studies described on pages 3.8-35 to 3.8-39 that are intended to determine and mitigate the potential for aquifer contamination?

### **3.8 Land Use**

- a) Figure 3.9-1 legend is illegible.
- b) Morrison Creek Cross-tie is not identified in land use designations and zoning maps (Figures 3.9-1 or 3.9-2) nor is it included in discussion of Existing Conditions (i.e, land use designation onsite and adjacent). Please provide.
- c) Existing conditions for pipeline connections and HDD work areas are not included in text of document. Please provide.
- d) UPRR is not identified in any graphics. Please provide graphic that clearly labels the location of the UPRR within the vicinity of the project. Provide discussion of potential impacts to UPRR operations during construction. Also, discuss whether or not UPRR right-of-way acquisition would be required.
- e) Provide location and description for all sensitive land uses (schools, residences, health care, etc.) within one-mile of proposed project.
- f) Describe and provide graphic illustrating any proposed or planned land uses within one-mile of proposed project.

### **3.9 Noise**

- a) *Page 3.10-2, Table 3.10.-1:* Noise measurements were taken for 10 minutes durations. Longer duration (at least 24-hours) noise level measurements would be required to assess both the daytime and nighttime existing ambient noise levels at existing noise sensitive receptor locations.
- b) *Page 3.10-10:* Please provide a complete inventory of compressor station and wellhead equipment that generates noise, including manufacturers' noise levels (if possible).

# ATTACHMENT A

## Review of Completeness

---

Otherwise, provide power, speed (rpm) and capacity information for all planned noise generation equipment.

### 3.10 Population and Housing

No additional information required at this time.

### 3.11 Public Health and Safety

#### a) Project Description

- i. Additional information is needed on the pipeline ROW limits and centerline in order to conduct the quantitative risk assessment. Please provide preliminary pipeline alignment drawings for the proposed and alternative pipeline routes. These drawings should include an aerial photograph depicting the proposed pipeline alignment within approximately 300-feet on either side of the proposed routes.
- ii. Please provide the maximum, normal, and maximum operating parameters for all of the project components. At a minimum, the operating parameters should include pressure, temperature, and flow rates.
- iii. The Project Description discusses the use of SMUD Line 700 to transport natural gas to PG&E Lines 400/401 and 108. Please describe any operational or other changes that may be required to SMUD Line 700 to accommodate the transportation of this gas. For example:
  - What is the current normal and maximum operating pressure? Will the normal and maximum operating pressures change if SNGS ships over this line?
  - What is the current normal and maximum flow rate? Will the normal and maximum flow rates change if SNGS ships over this line?
  - Are there any improvements or upgrades required to SMUD Line 700 to accommodate SNGS shipments? If so, please describe.
  - When was SMUD Line 700 constructed? What is the diameter, wall thickness, pipe grade, coating type, results of pipeline integrity monitoring, general condition, etc.?
  - If there are significant changes in operating conditions required of the SMUD Line 700, please provide alignment sheets and operational/design data for the portion of the system to be used.

## **ATTACHMENT A**

### **Review of Completeness**

---

- iv. Please provide a copy of any qualitative or quantitative risk assessment which may have been conducted to assess potential risks to the public resulting from unintentional releases and subsequent fires and explosions. Please also provide the significance criteria used for evaluating individual and societal risks.
- v. Page 2-12, “A portable electric drive compressor would be brought onto the compressor station site two to three months before the system is active...” Please describe any other temporary components that may be required to “prime” the storage facility. For example:
  - Will there be any temporary piping or pipelines?
  - Will all other facilities be complete, except for the permanent compressors during “priming”?
  - Will all leak detection and other safety systems be operative during this temporary situation? If not, please provide a description of those systems that will not be in place.
- vi. Page 2-21, please provide a detailed description of the proposed leak detection system, automated systems, shut-down system and other controls being proposed.

#### **b) Existing Conditions**

- i. Please provide copies of the referenced Phase I Environmental Site Assessments listed below:
  - Kleinfelder, Phase I Environmental Site Assessment, 6881 Power Inn Road, Sacramento, California, January 26, 2006.
  - National Assessment Corporation, Phase I Environmental Site Assessment Report Depot Park 16 Business Park Way, Sacramento, California 95927, June 14, 2004.
- ii. Please provide a detailed description of the proposed pipeline components. For example:
  - What are the proposed wall thicknesses, pipe grades, external coating types, etc.?
  - How and where will the tie-ins will be made to the existing lines in Fruitridge Road? Will these connections be made in vaults beneath the street? Please provide conceptual drawings of the tie-in facilities to each line.

## **ATTACHMENT A**

### **Review of Completeness**

---

- Provide a description of the proposed supervisory control and data acquisition system (SCADA). What type of hardware and software will be used? How will the system be configured?
  - Provide a description of the proposed pipeline leak detection system. What type of software will be used? What is the sensitivity and anticipated performance of the system (e.g., time to alarm for various leak flow rates)?
  - Describe any remotely operated or automatically operated valves or automated pipeline control systems. These should include any remotely or automatically operated valves, emergency blow-down (de-pressurization) facilities, etc.
  - Describe the operating and emergency response procedures for the following situations: electrical power loss, loss of communications, leak response, fire response, explosion response, emergency shutdown, and any other situations deemed critical.
  - What, if any, measures are proposed beyond those required by 49 CFR 192 to minimize the likelihood of leaks from the major causes (e.g., external corrosion, internal corrosion, 3rd party damage, operating error, design flaw, equipment failure, weld failure, etc.)?
  - What type of cathodic protection system (impressed current or sacrificial anodes) will be used? If an impressed current system is planned, where will the rectifier be located?
  - How and where will internal corrosion be monitored and controlled?
  - Describe any remotely operated or automated pipeline control systems. These should include remotely/automatically operated valves, emergency blow-down (de-pressurization) facilities, etc.
- iii. Please provide a detailed descriptions of the Compressor Station, Wellhead Site, and Morrison Creek Cross-tie Station. For example:
- What safety measures will be incorporated into the design of the compressor building? Will all or part of the compressor building requirements of 49 CFR 192 be incorporated into the design of this building? Will the building occupancy be classified as F-1 or H, in accordance with the California Building Code (CBC)? Will all applicable design requirements and safety systems of the CBC be included in the building design?
  - Please provide a description of the proposed compressor station safety equipment. For example, will motion detectors, release monitors, fire

# ATTACHMENT A

## Review of Completeness

---

detection equipment, security cameras, etc. be installed to monitor this location? Please explain the extent of any such equipment both inside the compressor building, as well as outside the building.

- What safety systems are proposed to protect the public at the wellhead and compressor sites (e.g., fire or blast walls, sound walls, etc.)?
- What are the normal and maximum operating pressures, flow rates, and temperatures for the facilities.
- Describe the control systems for each site.
- Describe the over-pressure control system for each facility.
- Describe the emergency shutdown system for each facility.
- Describe the operating and emergency response procedures for the following situations: electrical power loss, loss of communications, leak response, fire response, explosion response, and emergency shutdown. Please describe any secondary or redundant power, communications, or control systems.
- Provide information on the reliability and failure rate for the proposed compressors and other major equipment. Please describe typical compressor failures, especially those that may result in the release of natural gas.

- c) **Impact Assessment Results:** Page 3.12-13 of the PEA states, “There are no schools within one-quarter mile of the proposed project, therefore, there would be no safety hazards associated with hazardous emissions within one-quarter mile of an existing or proposed school...” Please provide the results of any release modeling and subsequent fire and explosion analysis to support this conclusion.

### 3.12 Public Services and Utilities

- a) *Page 3.13-13 (PSU-1, Other Public Facilities):* Are there any known utilities, such as other high-pressure natural gas lines in the proposed rights-of-way? Would horizontal boring be required under existing utilities that would result in additional workspace requirements not shown on Figure 2-2?
- b) Will the pipeline alignment be within the UPRR right-of-way? (See also deficiency request 3.8 regarding UPRR.)

### 3.13 Transportation and Circulation

# **ATTACHMENT A**

## **Review of Completeness**

---

- a) Under TRA-4, the impact analysis assumes the roadway closures where pipe is installed along the roadside would be “limited” because it would not be in the road itself. What would the workspace needs be during trench excavation, spoil stockpiling, pipe installation, etc.? Would these operations require lane closure?

### **4.0 ALTERNATIVES**

- a) Provide description and illustration of any other abandoned storage fields considered for the project and why these fields were rejected. If other fields were not evaluated describe why not.

### **APPENDICES**

- a) Please submit Appendix A electronically in Word or Excel.
- b) Please confirm that the property owners listed in the table only include property owners above the Florin Gas Field (i.e. the list does not contain adjacent property owners).